

## CLAIMS

1. An antenna device, comprising:  
an antenna element;  
5 a high-frequency circuit connected to the antenna element;  
a first ground section connected to the high-frequency circuit;  
a reactance circuit connected to the first ground section; and  
a second ground section connected to the reactance circuit.
- 10 2. The antenna device of claim 1, further comprising:  
a transmitter-receiver; and  
a feeder line for connecting between at least any one of the first ground  
section and the second ground section and the transmitter-receiver.
- 15 3. The antenna device of claim 2,  
wherein the feeder line is a coaxial line including  
a signal line, which is connected to the high-frequency circuit,  
and  
a shield line that is disposed so as to surround the signal line and  
20 is connected to at least any one of the first ground section and the  
second ground section.
4. An antenna device, comprising:  
an antenna element;  
25 a high-frequency circuit connected to the antenna element;  
a ground section connected to the high-frequency circuit;  
a reactance circuit; and

a coaxial line having

a signal line and

a shield line that is disposed so as to surround the signal line and  
is connected to the ground section,

5 wherein, the shield line has

a first shield line and

a second shield line connected to the first shield line via the  
reactance circuit.

10 5. The antenna device of claim 1 or claim 4,  
wherein the reactance circuit is formed of a parallel circuit of an inductor  
element and a capacitor element.

6. The antenna device of claim 1 or claim 4,  
15 wherein the reactance circuit includes a variable capacitance diode  
element.

7. The antenna device of claim 1 or claim 4,  
wherein the reactance circuit includes  
20 a plurality of reactance elements and  
a switch for switching the reactance elements.

8. The antenna device of claim 1 or claim 4,  
wherein the high-frequency circuit includes a receiving power detecting  
25 circuit for controlling a reactance value of the reactance circuit.

9. The antenna device of claim 8,

wherein the high-frequency circuit includes an amplifier, and  
the receiving power detecting circuit detects receiving power of output  
from the amplifier.

5        10.    The antenna device of claim 1 or claim 4,  
             wherein the reactance circuit include a reactance-value control circuit for  
controlling a reactance value of the reactance circuit.

             11.    The antenna device of claim 1 or claim 4,  
10               wherein the reactance circuit is positioned so as to have a substantial  
distance of a length of  $n$  times wavelength and a half of wavelength in electrical  
length (where,  $n$  takes a positive integer including zero) away from a feeding  
point of the ground section.

15        12.    The antenna device of claim 3 or claim 4,  
             wherein a control signal for controlling a reactance value of the reactance  
circuit is added on the signal line.